

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/000006

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C10M169/02, 169/00, F16C33/66// (C10M169/02, 105:32, 115:08) (C10M169/00, 105:32, 115:08, 125:02, 129:26, 129:68, 133:04), C10N30:00, 30:06, 30:08, 30:12, 40:02, 50:10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C10M169/00-169/06, 105/32-105/48, 115/08, 125/02, 129/26-129/84, 133/04-133/14, C10N30:00, 30:06-30:08, 30:12, 40:02, 50:10, F16C33/66

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X Y | JP 2001-107073 A (Kyodo Yushi Co., Ltd.), 17 April, 2001 (17.04.01), (Family: none) | 1-3, 6-7 4-5 |
| X Y | JP 8-209176 A (NSK LTD.), 13 August, 1996 (13.08.96), (Family: none) | 1-3, 6-7 4-5 |
| Y | US 2002/0076125 A1 (NSK LTD.), 20 June, 2002 (20.06.02), & JP 2002-195277 A | 4 |
| Y | US 2001/0034306 A1 (ISO Kenichi et al.), 25 October, 2001 (25.10.01), & DE 10108343 A1 & JP 2001-234935 A & US 2002/0082175 A1 | 5 |

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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|---|--|
| * Special categories of cited documents: | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
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| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | |

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| Date of the actual completion of the international search 28 January, 2004 (28.01.04) | Date of mailing of the international search report 10 February, 2004 (10.02.04) |
| Name and mailing address of the ISA/ Japanese Patent Office | Authorized officer |
| Facsimile No. | Telephone No. |

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|--------------|--|-----------------------|
| P, X P, Y | JP 2003-342593 A (NSK LTD. et al.), 03 December, 2003 (03.12.03), (Family: none) | 1-3, 5-7 4 |
| E, X E, Y | JP 2004-3596 A (NTN Corp.), 08 January, 2004 (08.01.04), (Family: none) | 1-3, 5-7 4 |
| E, X E, Y | JP 2004-18597 A (NTN Corp.), 22 January, 2004 (22.01.04), (Family: none) | 1-3, 6-7 4-5 |